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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/483,723	01/14/2000	Sharon S. Liu	5437-109	8755

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SAN JOSE, CA 95125

EXAMINER

REAGAN, JAMES A

ART UNIT	PAPER NUMBER
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3621

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

pplicant(s)

09/483,723

LIU ET AL.

Examiner

Art Unit

James A. Reagan

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-- The MAILING DATE of this communication appears n the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-23,34-46 and 57-105 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-23,34-46 and 57-105 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Pri rity under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. In view of the Appeal Brief filed on 20 October 2003 (paper #16), PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requires of this title.

3. Claims 11 and 34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to nonstatutory subject matter. The basis of this rejection is set forth in a two-prong test of:

(1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, the recited steps of merely *receiving a request, instantiating and implementation, determining a set of zero or more restrictions, encapsulating, providing a wrapper instance, and mapping* does not apply, involve, use, or advance the technological arts since all of the recited steps can be performed without the use of any technological apparatus, system or method such as, for example, a computer system, database, electronic circuit, or software application. These steps only constitute a method that is easily attainable without the use of any state-of-the-art devices or techniques.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 11, 34, and 57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The terms "an application" and "a particular service" are broad and undefined.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Examiner's note: Examiner has pointed out particular references contained in the prior art of record in the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the *entire* reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

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7. Claims 11, 12, 15, 18, 19, 34, 35, 38, 41, 42, 57, 58, 61, 64, 65, 70-80, 83-87, 92-96, and 101-105: are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (Object-Oriented Information Systems (c) 1992), in view of Pressman (Software Engineering: A Practitioner's Approach (c) 1982-1997).

Claims 11, 12, 15, 34, 35, 38, 57, 58, and 61:

With regard to the limitations of:

- *receiving a request from an application for a customized implementation of a particular service;*
- *instantiating an implementation class which provides an implementation for the particular service to give rise to an implementation instance;*
- *determining a set of zero or more restrictions to be imposed on said customized implementation;*
- *instantiating a wrapper class to give rise to a wrapper instance, said wrapper instance comprising enforcement logic for enforcing said restrictions; encapsulating said implementation instance and said restrictions within said, wrapper instance;*
- *providing said wrapper instance to the application as said customized implementation;*
- *wherein said wrapper instance comprises one or more invocable methods, wherein said implementation instance*

comprises one or more invocable methods, and wherein encapsulating comprises; and

- *mapping the one or more invocable methods of said wrapper instance to the one or more invocable methods of said implementation instance*
- *determining whether the implementation class is authentic;*
and
- *in response to a determination that the implementation class is authentic, instantiating the implementation class to give rise to said implementation instance;*
- *accessing information specifying one or more limitations;*
and
- *processing said limitations to derive said restrictions*

Taylor in at least chapter 1 of his textbook introduces fundamental object-oriented software technology mechanisms. In chapters 3 and 4 Taylor begins an in-depth teaching of the essentials in OOD/OOA technology, and further into the book, describes in greater detail techniques and procedures for programming in an object-oriented environment. The limitations contained within the claim language recite rudimentary characteristics and techniques that one of ordinary skill in the object-oriented programming art would understand and accept as common knowledge in the industry. See also Taylor's discussion on encapsulation of legacy systems beginning on page 296, which applies

specifically to Applicant's wrapper instance of interfacing between various legacy encryption protocols currently in use.

In addition, Pressman discloses object-oriented software engineering (pages 1-22 and 549-576), which support the basic OOD/OOA concepts that are considered common knowledge to any college-level programmer in the computer programming arts. Since the Applicant appears to be merely claiming OOD/OOA programming concepts and principles, the cited references apply as a whole to the limitations of claims 11-23, 34-46, and 57-105. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Taylor and Pressman because these two textbooks teach the same programming techniques.

Claims 18, 19, 41, 42, 64, and 65:

With regard to the limitations of:

- *accessing information specifying one or more limitations;*
- *determining permissions, if any, granted to the application;*
and
- *reconciling said limitations and said permissions to derive said restrictions.*
- *said limitations and said permissions are reconciled to derive restrictions which are least restrictive.*

The combination of Taylor/Pressman discloses fundamental and intrinsic OOD/OOA concepts as shown above.

Claims 70-80, 83-87, 92-96, 101-105:

- *determining said set of zero or more restrictions includes determining a set of zero or more restrictions that are specific to said application.*
- *determining said set of zero or more restrictions that are specific to said application includes determining a set of zero or more restrictions that are customized for said application.*
- *said set is a first set, and wherein said customized implementation is a first customized implementation, and further comprising:*
 - *receiving a request from a second application for a second customized implementation of said particular service, wherein said second customized implementation differs from said first customized implementation;*
 - *instantiating said implementation class which provides said implementation for said particular service to give rise to a second implementation instance;*
 - *determining a second set of zero or more restrictions to be imposed on said second customized implementation, wherein said second set differs from said first set;*

- *instantiating said wrapper class to give rise to a second wrapper instance, said second wrapper instance comprising enforcement logic for enforcing said second set of zero or more restrictions;*
- *encapsulating said second implementation instance and said second set of zero or more restrictions within said second wrapper instance; and*
- *providing said second wrapper instance to said second application as said second customized implementation.*
- *said wrapper instance is invocable by the application without further interaction with the framework.*
- *the implementation class provides an unrestricted implementation for the particular service.*
- *said enforcement logic enforces said restrictions on said implementation instance.*
- *said enforcement logic enforces said restrictions on said implementation instance by:*
 - *receiving a set of desired parameters from the application;*
 - *determining whether the desired parameters exceed said restrictions; and*

- *in response to a determination that the desired parameters exceed said restrictions, preventing said implementation instance from operating.*
- *said enforcement logic is invoked upon initialization of said wrapper instance.*
- *the system further comprises an exemption mechanism class which provides an implementation for a particular exemption mechanism, and wherein said method further comprises:*
 - *instantiating the exemption mechanism class to give rise to an exemption mechanism instance; and*
 - *encapsulating said exemption mechanism instance within said wrapper instance.*
- *said enforcement logic is invoked upon initialization of said wrapper instance, and when invoked, said enforcement logic: determines whether said exemption mechanism instance has been invoked; and in response to a determination that said exemption mechanism instance has not been invoked, preventing said implementation instance from operating;*

The combination of Taylor/Pressman discloses fundamental and intrinsic OOD/OOA concepts as shown above.

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8. Claims 13, 14, 16, 17, 20-23, 36, 37, 39, 40, 43-46, 59, 60, 62, 63, 66-69, 81, 82, 90, 91, 99, and 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (Object-Oriented Information Systems (c) 1992), in view of Pressman (Software Engineering: A Practitioner's Approach (c) 1982-1997), and further in view of Shanton (US 5,369,702 A).

Claims 13, 14, 16, 17, 36, 37, 39, 40, 59, 60, 62, and 63:

The combination of Taylor/Pressman disclose fundamental and intrinsic OOD/OOA concepts as shown above, intrinsically disclosing:

- *determining whether the implementation class is authentic;*
and
- *the implementation class authenticates the framework prior to giving rise to said implementation instance;*

Taylor/Pressman do not disclose *verifying said digital signature and the particular service is an encryption/decryption service*. However, Shanton discloses encryption, decryption, and digital signatures in an OOD/OOA environment. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the OOD/OOA programming concepts and principles of Taylor/Pressman with Shanton's OOD/OOA security techniques because this increases "...the security of the system, while at the same time giving the individual user a large amount of flexibility and power" (Shanton, c4:14-16).

With regard to the limitations of *said information comprises a set of one or more default encryption limitations*, and *said default encryption limitations are derived by merging multiple jurisdiction policies and extracting therefrom the most restrictive encryption limitations*, Taylor discloses interfacing with various legacy systems as shown above.

Claims 20-23, 43-46, and 66-69:

With regard to the following limitations, the combination of Taylor/Pressman discloses fundamental and intrinsic OOD/OOA concepts as shown above.

- *determining whether the application has been granted any permissions; and*
- *in response to a determination that the application has not been granted any permissions, deriving said restrictions from said set of default encryption limitations.*
- *determining whether the application has been granted any permissions which require implementation of a particular exemption mechanism;*
- in response to a determination that the application has been granted a permission which requires implementation of a particular exemption mechanism, determining whether said exempt encryption limitations allow said particular exemption mechanism to be implemented;

The combination of Taylor/Pressman does not disclose:

- *the particular service is an encryption/decryption service, and wherein said information comprises a set of one or more default encryption limitations, and a set of zero or more exempt encryption limitations which apply when one or more exemption mechanisms are implemented.*
- *said default encryption limitations and said exempt encryption limitations are derived by merging multiple jurisdiction policies and extracting therefrom the most restrictive encryption limitations.*
- *in response to a determination that said exempt encryption limitations allow said particular exemption mechanism to be implemented, deriving said restrictions from said set of exempt encryption limitations.*

However, Shanton discloses encryption, decryption, and digital signatures in an OOD/OOA environment. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the OOD/OOA programming concepts and principles of Taylor/Pressman with Shanton's OOD/OOA security techniques because this increases "...the security of the system, while at the same time giving the individual user a large amount of flexibility and power" (Shanton, c4: 14-16). See also Taylor's discussion on encapsulation of legacy systems beginning on

page 296, which applies specifically to Applicant's wrapper instance of interfacing between various legacy encryption protocols currently in use.

Claims 81, 82, 90, 91, 99, and 100:

The combination of Taylor/Pressman discloses fundamental and intrinsic OOD/OOA concepts as shown above. Taylor/Pressman do not disclose:

- *the particular service is an encryption/decryption service,*
- *the unrestricted implementation provided by the implementation class is capable of using unlimited encryption/decryption parameters; and*
- *the unrestricted implementation provided by the implementation class is capable of using encryption/decryption keys of any size.*

However, Shanton discloses encryption, decryption, and digital signatures in an OOD/OOA environment. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the OOD/OOA programming concepts and principles of Taylor/Pressman with Shanton's OOD/OOA security techniques because this increases "...the security of the system, while at the same time giving the individual user a large amount of flexibility and power" (Shanton, c4: 14-16). See also Taylor's discussion on encapsulation of legacy systems beginning on page 296, which applies specifically to Applicant's wrapper instance of interfacing between various legacy encryption protocols currently in use.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to **James A. Reagan** whose telephone number is **(703) 306-9131**. The examiner can normally be reached on Monday-Friday, 9:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **James Trammell** can be reached at (703) 305-9768.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Receptionist** whose telephone number is **(703) 305-3900**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 305-7687 [Official communications; including

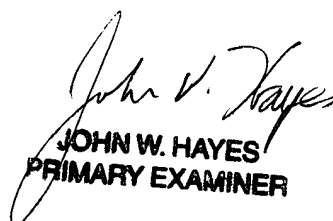
After Final communications labeled "Box AF"]

(703) 308-1396 [Informal/Draft communications, labeled
"PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2451
Crystal Drive, Arlington, VA, 7th floor receptionist.

JAR

27 December 2003


JOHN W. HAYES
PRIMARY EXAMINER